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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Anne J. Osinga

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EXAMINER

GLASS, ERICK DAVID

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/687,731	Applicant(s) OSINGA, ANNE J.	
	Examiner Erick Glass	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kornrumpf et al (US 3,786,219), in further view of Pollutro (US 6,278,470) and Kovach (US 6,259,218).

With respect to claim 1, Kornrumpf teaches a power conversion unit with power conversion circuitry (fig. 5, 12) having a transformer (fig. 5, 15); a snubber circuit (fig. 5, 29, 30) for absorbing power from the transformer; and a housing containing the power conversion circuitry and snubber circuit; wherein the snubber circuit provides power absorbed from the transformer to the power conversion circuitry (column 7, lines 31-35).

Kornrumpf and Pollutro do not teach a housing containing the power conversion circuitry for the movable window covering. Kovach teaches a housing (fig. 3) containing the power conversion circuitry for the movable window covering (abstract). Kornrumpf teaches as power conversion circuit similar to Pollutro and Kovach. It would have been obvious for one having ordinary skill in the art to apply this to another appliance and to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 2, Kornrumpf teaches wherein the snubber circuit provides absorbed power to the primary side (column 7, line 45) of the transformer.

With respect to claim 3 and 38, Kornrumpf teaches wherein the transformer includes high frequency ferrite transformer cores (column 4, line 45).

With respect to claim 4, Kornrumpf teaches wherein the power conversion circuitry (fig. 5, 12) includes a rectifier (fig. 5, 13) and an inverter (fig. 5, 14) for converting the DC power to high frequency AC power for supply to the transformer (fig. 5, 15).

With respect to claim 5 and 39, Kornrumpf does not teach wherein the high frequency is over 100 kHz. Pollutro teaches wherein the high frequency is over 100 kHz⁷ (column 2, line 14). It would have been obvious to make changes to the frequency, a known circuit ready for improvements to yield predictable results.

With respect to claim 6 and 40, Kornrumpf teaches wherein the inverter can invert the DC power to high frequency AC power with a fluctuating frequency (column 7, lines 23-26).

With respect to claim 7 and 41, Kornrumpf does not teach wherein the frequency fluctuates between 250 kHz and 300 kHz (does teach a varying frequency). Pollutro wherein the frequency fluctuates between 250 kHz and 300 kHz (column 1, line 30-35). It would have been obvious to make changes to the frequency, a known circuit ready for improvements to yield predictable results.

With respect to claim 8, Kornrumpf and Pollutro do not specifically teach of a movable window covering or circuitry shape. Kovach teaches said housing has a cross section suitable for insertion into a headrail of a window covering (column 6, lines 5-36). It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 9, Kornrumpf and Pollutro do not specifically teach of a movable window covering or shape. Kovach teaches wherein said housing is elongate in a direction substantially perpendicular to said cross section (column 6, lines 5-36). It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 10, Kornrumpf does not teach about circuit boards and shape of the circuit. Pollutro teaches wherein the power conversion circuitry includes first and second circuit boards (column 2, lines 30-43; fig. 1A, 1B) extending in said elongate direction, the first circuit board supporting at least said transformer and the second circuit board supporting at least other components of the power conversion circuitry. It would have been obvious to provide circuits/component with circuits boards, using known methods to produce equivalent elements.

With respect to claim 11, Kornrumpf does not teach about circuit boards and shape of the circuit. Pollutro teaches wherein the transformer is divided into a plurality of serially connected sub-transformers arranged along the first circuit board (column 2, lines 30-43) in an array in the elongate direction. It would have been obvious to provide

circuits/component with circuits boards, using known methods to produce equivalent elements.

With respect to claim 12, 13, 17 and 31, Kornrumpf teaches wherein large components, such as capacitors (fig. 5, 27). But does not teach being are supported at one or both ends of one or both of the first and second circuit boards (column 2, lines 30-43) and extend generally in the elongate direction. Kornrumpf does not teach about circuit boards and shape of the circuit. Pollutro teaches being supported at one or both ends of first and second circuit board (column 2, lines 30-43) extended generally in the elongate direction. It would have been obvious to provide circuits/component with circuits boards, using known methods to produce equivalent elements.

With respect to claim 14, 15, 16 and 32, Kornrumpf does not teach about circuit boards and shape of the circuit. Pollutro teaches wherein the first and second circuit boards (column 2, lines 30-43) are joined end to end so as to form a single elongate circuit board. It would have been obvious to provide circuits/component with circuits boards, using known methods to produce equivalent elements.

With respect to claim 18 and 33, Kornrumpf and Pollutro do not specifically teach of a movable window covering or circuitry shape. Kovach teaches for use with a headrail (abstract) having a rotatable shaft (fig. 3, 124) extending along the headrail at a generally central position (fig. 3), the housing having a cross section suitable for insertion into the headrail on generally one side of the rotatable shaft . It would have

been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 19 and 34, Kornrumpf does not teach about circuit boards and shape of the circuit. Pollutro teaches wherein the first and second circuit boards extend in generally parallel spaced apart planes so as to define at least a central space there between (column 2, lines 30-43). It would have been obvious to provide circuits/component with circuit boards, using known methods to produce equivalent elements.

With respect to claim 20, Kornrumpf and Pollutro do not specifically teach of a movable window covering or circuitry shape. Kovach teaches for use with a headrail (fig. 1, 102) having a rotatable shaft (fig. 3, 124) extending along the headrail at a generally central position, the housing having openings at each end in line with the central space (fig. 3) such that the housing can be inserted in the headrail with the rotatable shaft extending through the central space. It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 21 and 36, Kornrumpf and Pollutro do not specifically teach of a movable window covering. Kovach teaches wherein the housing includes end caps (fig. 1, 112) at each end, the end caps defining said openings (fig. 1). It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 22 and 37, Kornrumpf does not specifically teach of a movable window covering. Kovach teaches wherein the housing includes an inner wall defining an elongate central (fig. 3) passageway extending through the housing in the central space, the passageway allowing the shaft (fig. 3, 124) to be located extending through the housing. It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 23 and 42, Kornrumpf does not specifically teach of a movable window covering. Kovach teaches headrail for a window covering (abstract) including the power conversion unit of claim 1. It would have been obvious for one having ordinary skill in the art to house the circuitry and mechanical parts for safety and appearance, as taught by Kovach.

With respect to claim 24 and 43, Kornrumpf and Pollutro do not specifically teach of a movable window covering. Kovach teaches including a rotatable shaft (fig. 3, 124) extending generally centrally (fig. 3) along the length of the headrail. It would have been obvious for one having ordinary skill in the art to house the circuitry and mechanical parts for safety and appearance, as taught by Kovach.

With respect to claim 25 and 44, Kornrumpf and Pollutro does not specifically teach of a movable window covering. Kovach teaches window covering assembly including the headrail (abstract) of claim 23 or 24. It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 26, Kornrumpf teaches providing in the conversion circuitry a snubber circuit (fig. 5, 29, 30) for the transformer (fig. 5, 15), the snubber circuit absorbing power (column 7, lines 31-35) from the transformer and supplying power absorbed from the transformer back to the conversion circuitry such that heat generation from the conversion circuitry with the transformer is minimized.

Kornrumpf and Pollutro do not teach a powered movable window wherein the mounting of the conversion circuitry in the headrail of the window covering so as to reduce the overall size of the window covering. Kovach teaches a powered movable window (abstract) wherein the mounting of the conversion circuitry in the headrail (fig. 3) of the window covering so as to reduce the overall size of the window covering. It would have been obvious for one having ordinary skill in the art to apply this to another appliance and to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 27, Pollutro teaches supplying the transformer with high frequency AC power (column 2, lines 30-43) and using high frequency ferrite cores (column 1, line 66) in the transformer.

With respect to claim 28, Pollutro teaches including fluctuating the frequency of the high frequency AC power (column 2, lines 30-43).

With respect to claim 29, Kornrumpf teaches power conversion circuitry (fig. 5, 12) having a transformer, a rectifier (fig. 5, 13) for converting mains power to DC power and an inverter (fig. 5, 14) for converting the DC power to high frequency AC power for supply to the transformer (fig. 5, 15). Kornrumpf does not teach a housing containing

the power conversion circuitry; wherein said housing is elongate in a direction substantially perpendicular to a cross section, the cross section suitable for insertion into a headrail of a window covering; and the power conversion circuitry includes first and second circuit boards extending in said elongate direction, the first circuit board supporting at least said transformer, the transformer being divided into a plurality of serially connected sub-transformers arranged along the first circuit board in an array in the elongate direction.

Pollutro teaches wherein the power conversion circuitry includes first and second circuit boards (column 2, lines 30-43; fig. 1A, 1B) extending in said elongate direction, the first circuit board supporting at least said transformer and the second circuit board supporting at least transformers, the transformers being divided into a plurality of serially connected sub-transformers arranged along the first circuit board in an array in elongate direction. It would have been obvious to provide circuits/component with circuits boards and have multiple transformers, using known methods to produce equivalent elements.

Kovach teaches wherein said housing is elongate in a direction substantially perpendicular to said cross section (column 6, lines 5-36) suitable for insertion into headrail of window covering. It would have been obvious for one having ordinary skill in the art to house the circuitry for safety and appearance, as taught by Kovach.

With respect to claim 30, Kornrumpf does not teach wherein the second circuit board supports at least other components of the power conversion circuitry.

Pollutro teaches wherein the second circuit board supports at least other components of the power conversion circuitry (column 2, lines 30-43). It would have been obvious to provide circuits/component with circuits boards, using known methods to produce equivalent elements.

Response to Arguments

Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is (571)272-8395. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erick Glass/

Examiner, Art Unit 2837

/Lincoln Donovan/

Supervisory Patent Examiner, Art Unit 2816